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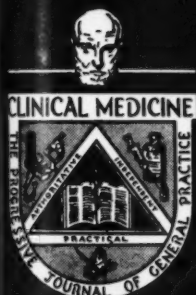
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Early Manifestations of Mental Disorder

By J. B. deFOREST, M.D., and MORRIS HERMAN, M.D.

New York, N. Y.

The general practitioner is the first great filter through which the patient passes in his road to classification, diagnosis and treatment. The general physician may do a great service for his patient by evaluating him physically and emotionally.

UNLESS the physician is aware of his own attitude toward mental illness as well as of the emotional needs of the patient he will not be able to evaluate early symptoms of mental disorder. The practitioner must also learn that *early symptoms of mental disorder may manifest themselves not only in the form of obvious emotional symptoms but also masquerade as organic disease.* Those patients with organic disease in whom emotional factors play an important if not decisive role should be recognized. The physician must gain the facility of judging the severity of emotional disturbances in order to determine when psychiatric consultation is in order. He should not delay until he is forced to seek help because of the increasing severity of the patient's condition as shown by a suicide attempt or some other extreme act. This is a plea for early treatment. A necessary prelude is early recognition and this responsibility rests in the hands of the general practitioner.

Faults of the Physician

Let us first consider the position in which the practitioner finds himself when confronted with a neurotic patient. By and large, he will react in one of two ways. He may dismiss the patient as being "just neurotic," especially after a careful examination and various clinical and laboratory tests reveal no relevant organic pathology, or he may be overzealous in his attempt to help the patient solve his problems in living.

The physician who considers his patient to be at fault senses his own inadequacy in dealing with this variety of illness. Most often, he has only had a minimum of psychiatric training in medical school and all too frequently medical schools gloss over this subject. This necessarily fosters a feeling of inadequacy in the practitioner who cannot derive satisfaction in helping patients of this kind. His heart is not in the job, and because of his discomfort, due to his inadequacy, he tends to hold his patient responsible. Moreover, the neurotic patient may also arouse other unpleasant feelings in the physician. The patient may become a symbol of the physician's own emotional difficulties which cause anxiety.

The other usual reaction to such patients is that of being so concerned that the doctor's objective judgment is clouded. This type of physician feels challenged by the emotional needs of the patient, and the doctor feels his self esteem threatened unless he solves his patient's problems. This physician has developed an attitude which makes it necessary for him to seek the adulation and adoration of his patients. His personality reaction is a mask for certain insecurities and anxieties in himself. Such a physician will tend to minimize symptoms of a neurotic nature in his patients and he will attempt to solve their difficulties on a "common sense" basis for too long a period. The physician who does not feel either threatened by the emotional nature of his patient's problems or the need to impress his patients with his wisdom will be in a position to view his patients objectively and treat them accordingly.

The physician's examination of every patient should include an estimation of

the patient's personality. This is necessary not only for the early recognition of psychiatric disturbances and the relation between personality and organic disease, but also because certain personalities are not readily amenable to therapy.

Types of Patients

We agree with Dr. Thompson that with respect to the reaction of patients to therapy, the following groups may be recognized:

The first category comprises those who are serious in their endeavor to get well. They have likeable qualities and wish to cooperate for therapy. They do not overly exaggerate their symptoms. Although these patients may suffer greatly, they do not use their symptoms to exploit or hurt others. They have positive personal qualities which have been utilized by the patient to make a fairly satisfactory adjustment.

The second group of patients are emotionally immature, passive and have no real interest in getting well. They center their lives around their chronic complaints and their visits to the doctor. The elderly, dependent spinster is a characteristic example. This patient does not seek cure but under the kindly guidance of the doctor may develop new interests although dependence on the physician usually persists.

The third class of patients are those who are interested chiefly in having the seriousness of their illness confirmed. They are not fundamentally imbued with the desire to get well. They make active use of their ill state to dominate others. These patients are by no means passive in interpersonal relationships but on the contrary are dominant and aggressive. The mother who uses her symptoms to nurture feelings of guilt in her children so that they will not leave her and establish their own lives is an example. Such a woman cannot afford to lose the idea that she is seriously ill. Reassurance by the physician gives the patient the impression that the doctor does not consider her symptoms seriously. It will often produce in the patient a reaction of distrust, defiance and even hostility. *Patients who use their illness*

in this destructive manner require the consultation of a psychiatrist.

The patients in group one offer the best chance for treatment. Those in groups two and three require long intensive psychotherapy if there is to be any permanent and satisfactory result.

Psychosomatic Outlook

With our increasing knowledge of psychosomatic medicine we realize that disorders of the body and mind cannot be separated. The fashion in which the two interact is of ever increasing interest. Psychiatrists believe that the emotional disorders can be recognized by positive evidence rather than simply by exclusion of organic findings. One should make certain of one's findings both in the organic and psychological spheres, and bear in mind that proof of disorder in one does not eliminate disturbance in the other. There are abundant examples of organic illnesses alleviated or cured by an understanding of the psychic factors involved.

E. B. Astwood² reported a case of Graves' disease in a 35 year old woman who showed toxic signs and symptoms only following altercations with her husband. When her life was running smoothly, her manifestations of hyperthyroidism disappeared. Hypertension, asthma, ulcer of the stomach and hyperthyroidism are among the organic diseases which have been found to have an important psychogenic component. Patients with these conditions need the cooperative care of the practitioner and the psychiatrist.

There are numerous descriptions of cases in the literature where physical symptoms are complained of but no organic disorder can be demonstrated. Many of these complaints have characteristics which make them easy of detection. Asthma of the neurotic type is an example. Zilboorg³ has noted that among other findings the neurotic asthmatic has difficulty in inspiration whereas the allergic asthmatic patient experiences expiratory distress. The importance of an appreciation of emotional factors can be seen from the following observations.

Bennett and Semrad⁴ reported that out of 110 psychoneurotic admissions to the

University of Nebraska Hospital 72 were sent in with erroneous diagnoses of severe organic disease. Weiss⁵ found that of 200 consecutive private patients in a medical practice that 35% showed illness of an entirely emotional nature; 35% had emotional problems closely related to the illness, and in 30% the emotional problems did not seem connected to the cause of the disorder.

Diagnosis

The diagnosis of mental disorder is determined by the nature of the complaints and the patient's behavior. These manifestations are derived from the integration of four historical factors: 1. constitution, 2. personality development, 3. organic conditions, past or present, and 4. recent precipitating events.

Early symptoms of neuroses are usually brought to the attention of the doctor by the patient himself. Common complaints are anxieties, obsessions and compulsions. Anxiety may appear as manifestations of the autonomic nervous system in the form of sweating, tachycardia, diarrhea, vertigo, and so forth, accompanied by a feeling of fear or impending doom. Anxiety may also be displaced from awareness to the production of certain mimicked organic disturbances such as hysterical paralysis, aphonia, and so on. Obsessions and compulsions are frequently found in individuals who are excessively orderly, penurious and rigid. Fear of traveling, marked self consciousness especially with the opposite sex, personal superstitions with regard to warding off evil are examples of neurotic symptoms. It must be stressed, however, that anxiety and feelings of insecurity which underlie neurosis are frequently masked by bodily disturbances. The patient who comes to the general practitioner seeks help because of insomnia, weakness, headache, constipation, palpitation, and the like, but to the alert practitioner the neurosis will become transparent as the personality is uncovered.

Affective Reactions

Another group of illnesses are those known as affect disorders because the primary disturbance is the emotional sphere. They are characterized by symp-

toms of an emotional disturbance which is disproportionate in degree to the situation responsible, and more prolonged. They tend to be recurrent and frequently lead to serious states of mental disorder. The altered mood may be so severe that it undermines the patient's health and in a depression may readily lead to suicide. The mood change dominates every aspect of his behavior including his thinking. It should be pointed out that this type of disorder requires careful evaluation because at the onset we may overlook the serious significance of the emotional change and ascribe it to some environmental occurrence. Our evaluation may be obscured also by the process of identification in which we develop a feeling of pity and of kinship for the patient's problems. An example of an affect disorder is involuntal melancholia which is seen in men and women at the time of the menopause. Beginning symptoms are inability to carry out household tasks, despondency, guilt feelings, somatic complaints and inappropriate jealousy which may be extended to frank delusional thinking. Finally the patient may become agitated or commit suicide. Manic depressive psychosis is another variety of affect disorder of marked alteration of mood either in the form of depression or an elation. These states persist for many months. In between attacks, the patient is usually quite well.

Patients in depressive states, particularly the involuntal melancholias, frequently have suicidal impulses. Suicidal attempts represent a personality problem and must always be taken seriously. By and large, suicide attempts may represent aggressive feelings towards others that are turned against oneself, frank revenge, or the only way of escaping an unbearable reality. Neurotics and maladjusted personalities do occasionally make suicide attempts, but these rarely result in death. Patients in delirium or panic states may kill themselves while under the influence of fearful delusional beliefs. An impending suicidal attempt is inferred by noting the presence of a deep depressed mood, concealment of suicide thoughts when they had been previously noted, persistent insomnia, depressive delusions, a

past history of other suicide attempts and increased tension as noted by signs of anxiety and desperation.

Thinking or Trend Reaction Types

Disorders of thinking are manifested by peculiar distortions in behavior and in the concept formation of the individual. There is a lack of logical, orderly and systematic thinking. Typical of thinking disorders is schizophrenia which appears most frequently between adolescence and the involutional period. Early symptoms are a withdrawal from people and the environment, a tendency to think in a pseudo-philosophic manner and a lack of adequate and appropriate emotional responsiveness.

The family may not view this type of thinking as a symptom in their desire to believe they have an unusual and intelligent child. The symptoms may be hidden by a facade of organic complaints. The patient is bewildered and unable to explain logically the nature of his difficulties. Sometimes an adolescent may give reasons of a physical nature for his seclusiveness such as acne or ugly features which he wishes improved by plastic surgery. Such complaints should be evaluated within the total setting rather than immediately treated as isolated symptoms. The patient quite early in the course of the illness shows a disturbance of thinking known as projection. He falsely ascribes to his environment various circumstances that he holds responsible for his behavior. This is in marked contrast to the neurotic person who blames himself excessively rather than his environment. It is important to recognize these differences because the treatment will differ.

Organic Mental Syndromes

A third large group of mental disturbances which is frequently overlooked in early stages are those caused by organic brain disease. These are characterized by deficits in the sensorium; that is cognition, memory, intellect and orientation. Organic processes frequently release disturbances in mood and thinking. The mood or thinking disorder may overshadow the sensorial defects to such an extent that it may lead to an incorrect diagnosis. An early case of general

paresis may thus be mistaken for a depression or thought to be an elated state (manic). Not infrequently, early cases of cerebral arteriosclerosis present more affect disturbances or delusional thinking than the specific defects in the sensorium. Some cases of brain tumor show alterations of personality characteristics that are more prominent than the neurologic signs. All physicians should have skill in detecting changes in the sensorium. This knowledge is necessary for the proper evaluation of patients who are receiving medication such as bromides or barbiturate derivatives over a long period of time. It will also be of use in the early detection of delirious reactions during somatic illnesses so that the doctor can be in a position to institute prompt treatment.

Summary and Conclusions

1. The general practitioner must learn to recognize the early symptoms of mental disorder. In order to recognize emotional disturbances in his patients the physician should be aware of his own emotional reactions and his attitudes towards neurotic manifestations in others. It is important for him to know whether he reacts to neurotic patients in a manner indicating that his own security and self esteem are threatened. He may dismiss the patient as being just neurotic without adequately viewing the nature of the patient's symptoms or he may feel compelled to meet the challenge presented not for the sake of the patient but to satisfy his own emotional needs. A physician who is too much disturbed by his own emotional problems and too little aware of them in himself cannot be expected to diagnose accurately early mental symptoms in his patients.

2. Patients have been divided into three groups with respect to character types and their responsiveness to psychotherapy. The first group consists of those showing some neurotic symptoms, who have a strong desire to receive treatment and get well and who have shown their ability to make many successful adaptations in their life situations. The second group comprises individuals who are essentially passive and dependent. They have no aim or goal in life and have substituted their medical complaints for whatever attention and

satisfaction they may receive. The third group includes persons who are found to be hostile, aggressive and destructive. They use their symptoms for their own aggrandizement, and as a weapon against others. The first group responds best to psychotherapy.

3. It has been pointed out that emotional factors in illness play so important a role and occur so frequently that it is necessary for every physician to know how to evaluate the personality of every patient who comes to him. The diagnosis of psychosomatic illness can be made only through an application of this knowledge.

4. Early symptoms of mental illness have been discussed and described under the headings of neurotic reactions (psychosomatic disorders), affective reactions, thinking or trend reaction types, and organic mental syndromes.

5. The importance of the recognition

of incipient mental symptoms, so that early treatment can be instituted, is stressed.

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The Use of Small General Hospitals for Communicable Patients

By RICHARD W. MAXWELL, M.D.,* St. Louis, Missouri

THERE has long been a common belief that patients with communicable diseases should be excluded from general hospitals. Certain large hospitals in this country have now installed isolation units and any hospital can undertake such a project safely.

Such an installation provides more adequate facilities for private patients, and furnishes hospital privileges for communicable disease patients in small communities. The type of unit to be provided would depend upon its size, based on the need of the community, bearing in mind that most patients with communicable diseases will not require hospitalization. Approximately one bed per 10,000 population should be adequate to serve most communities.

The plan is to care for infectious diseases in small communities, by admitting them to the local hospital under the care of a general practitioner. In this situation an isolation ward would be impractical. In a community of 20,000 population, perhaps a maximum of patients to be accommodated would be three or four, with patientless intervals. Since it would not be safe to use an isolation ward for any other purpose unless it were completely vacant, such a unit implies a needless waste of space. The admission of more than one patient to a room could be tolerated only if the nursing staff was highly skilled in "barrier" nursing, and only if a single specially trained physician were in charge, with the provision that he check all admission diagnoses.

The Use of a Single Room

For the small community then, it is suggested that the unit of isolation be a

*Richard W. Maxwell, M.D., Department of Internal Medicine, Washington University. (Formerly Medical Director St. Louis Isolation Hospital)

single room. When the room houses an infectious disease patient, it is considered a completely contaminated, self-contained unit. No visitor should be allowed in the room, and only hospital personnel with the ability to carry out medical aseptic technic should enter the unit. Visitors are best taken care of by allowing only adults of the immediate family to stand in the corridor and talk to the patient through the open door.

If the technic outlined below is carried out by the physician and nurse, there is no danger of cross infections occurring except with measles, chickenpox and smallpox. Because these three diseases seem to be air-borne, the isolation unit (single room or several rooms) must be located at some distance from any group of children in the hospital. This is the only restriction as to location of the unit, except that of course the route to the unit should be as direct as possible, without passing through or close to the pediatric division. All the isolation units should be together so that a single charge nurse can manage all patients and gain added skill in caring for them. If the nurse carries out proper aseptic technic, there is no danger that they will carry any infection to other patients or hospital personnel when they are off duty.

The Room's Furnishings

The room must answer few specifications: It must be free of excess furnishings, and contain only a bed, bedside table, chair, and simple shade at the window. Curtains are not permitted. The mattress should be rubber-covered. Furnishings should be selected with the knowledge that they are to be washed with soap and water between patients. There must be toilet and hand-washing facilities in the unit. A box of paper towels should be on the wall above the wash basin.

Aseptic Technic

A charge nurse should be made entirely responsible for the carrying out of medical asepsis, with the privilege of pointing out errors to anyone committing them. Physicians are notoriously poor in observing technic and should take a reprimand cheerfully from the charge nurse. It is preferable that such a nurse

have previous training in an isolation hospital, but this is not at all necessary if she will read some of the available literature on the subject.

An adequate medical aseptic technic should include the wearing of a full-length gown with long sleeves by all employees who handle the patient. There should be a liberal supply of gowns so that they can be laundered between each using, except in the instance of nurses who may use the gown several times by removing it carefully and hanging it in the unit with contaminated side out (see standard text).

Upper Respiratory Infections

A mask should be worn by the attendant while caring for all patients whose infections are known to spread from the respiratory tract. In other words, when the patient has a throat or respiratory tract infection, the attendant should protect his own portal of entry by a mask. When the attendant has contaminated his hands he should then refrain from touching his mask or any exposed portion of his body or clothing. At the end of the examination or procedure the gown should be removed before the hands are washed, and the mask left on until the hands are washed. Careful washing of the hands with ordinary soap is sufficient, the person being careful that he does not touch the contaminated wash basin in the act of washing his hands, turning the faucet off with protection of the paper towel on which the hands have been dried.

Medical instruments and nursing equipment must be disinfected before being taken from the room. The stethoscope and other immersible articles should be left for five minutes in a basin of one per cent cresol solution, or equivalent disinfectant. Equipment that cannot be handled in this fashion should be received by a "clean" nurse with alcohol sponges, who thoroughly cleans the article with 70 per cent alcohol. Linens should be sorted in the unit and carefully placed in a laundry bag which stands in the corridor just outside the room. The outside of the bag is kept clean, and it should be plainly marked "contaminated" for the benefit of the laundry. The laundry need take no special precautions except that

the contents of the bag should be emptied directly into the washing machine without being touched until the laundering process is complete.

A very satisfactory way to manage the serving of food is to use paper cups and plates which can be discarded. If china dishes are used they must receive careful handling. Bedpans should be kept in the unit and all disposal of excreta made within the unit. When such equipment is removed from the unit it should be carried to the sterilizer with proper regard to its state of contamination.

Admission

At the time of admission of the patient to the hospital the patient's clothing should be given to the relatives if possible. It can be cleaned and returned to the patient then at time of discharge. If clothing must be kept in the hospital it should be hung within the patient's room, and can be considered clean enough for the patient to wear home when discharged. A discharge bath for the patient is desirable but not entirely necessary.

After Discharge

When a contaminated room is vacated, it should be thoroughly aired for an hour or two before a new patient is admitted. *Fumigation is unnecessary.* All equipment, including bed and rubber covered mattress, bedside table and chair, should be washed with soap and water. The floor should be thoroughly mopped, but the walls need not be washed.

Personnel Protective Immunizations

In addition to the essential items of isolation technique discussed above, all persons who are to come into contact with contagious disease patients, including laboratory technicians, should have certain immunizations as follows:

1. Diphtheria toxoid to produce a negative Schick test.
2. Smallpox vaccination, repeated at least every 5 years.
3. Typhoid vaccination, with an additional single injection of vaccine

given every one to two years to maintain maximum immunity.

Measles

It was noted above that three diseases were air borne and would spread to non-immune patients and personnel in spite of all precautions. These infections are measles, chickenpox and smallpox. Since almost every child has measles and chickenpox, most adults are naturally immune. Since almost all non-immune children will contract these two diseases eventually, and since they are not especially serious diseases, we do not worry a great deal even if they do occur as cross-infections in the hospital. During an epidemic of measles, a child desperately ill with any disease can be protected temporarily from measles by an injection of human serum globulin. In similar fashion, permanent immunity can be gotten by modifying the measles rather than entirely preventing it.

Smallpox

Smallpox in any community will spread disastrously unless the people are made immune by vaccination, and this is true whether the patient is hospitalized or not. But in the event a smallpox patient is admitted to a general hospital (and this will happen rarely in the United States), every patient in the hospital must be vaccinated at once unless a good vaccination scar is found. Patients who refuse to be vaccinated should sign a statement to that effect for the protection of the hospital.

In conclusion, one may say that if the routine as outlined for the care of contagious disease patients in a general hospital seems cumbersome, it is no less so in an isolation hospital. There is nothing mysterious about the care of a contagious disease patient, and any physician or nurse can master the principles of such care.

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Conditioned Reflex Treatment for Alcohol Addicts

By JOSEPH THIMANN,* M.D.

THE old and popular formulation, Psychotherapy versus physiologic or pharmacotherapy, implies this: Shall we declare psychotherapy as the therapy for alcohol addiction, or pharmacotherapy? Certainly no one would think of formulating an analogous question in regard to cancer, for instance: Radiation or surgery. In some cases one therapy is indicated, in others another, and sometimes a combination.

Patients' Classification Important

In alcoholics, as in other ill persons, the choice of therapy depends on the diagnosis, (the classification of the alcohol addict).

Social Drinkers

There are addictive drinkers, whose only abnormal trait is their inability to drink in a controlled way.

In the transitory state of sobriety, this group of addicts appears as well adjusted professionally and socially as any average person, thinks and feels "normally," and is able to assume the highest professional responsibilities, for instance that of a surgeon, physician, industrial executive, minister, etc. In other words, this type of alcoholic has developed his habituation to alcohol, grossly, by way of prolonged and excessive social drinking. Every experienced therapist knows how little psychotherapy alone (including psychoanalysis) is able to prevent relapses in such cases. What these unfortunates need is the elimination of their pathological desire for alcohol. Here, the so-called conditioned reflex treatment is the method of choice and often sufficient treatment in itself.

Drinking Due to Neurosis

The majority of alcohol addicts, however, represent the second type of compulsive imbibers, the so-called problem drinkers, whose addiction is not pre-

ceded by a period of social drinking at all, who care little for the sociability connected with the consumption of alcohol or its taste value, and for whom an alcoholic beverage is just a medicine to alleviate the suffering from an underlying neurosis.

In these cases, the elimination of the craving for liquor by means of the conditioned reflex treatment is only the elimination of a symptom. However, the main therapeutic factor of such patients, namely psychotherapy, is made easier and has more chance of success if the patient has first undergone the conditioned reflex treatment. The psychotherapy then is not interrupted by drinking bouts and is facilitated by the patient's regained self-assurance.

In some of these cases, too, the regained abstinence, with all the emotional and economic assets involved, may be sufficient to help in improving the neurosis, even without psychotherapy. The masochistic traits with feelings of guilt, so common in neurotics, seemingly find gratification in the fact that the treatment is, as they say, "tough" and that they are thus atoning for their guilt. There is also a sense of heroic accomplishment as compensation for their inadequacies.

Principle of Reflex Treatment

The conditioned reflex treatment is based on the experiments and studies of the physiologic laws of a reflex which depends on the formation of new functional connections in the central nervous system and which is, therefore, peculiar to the individual.

These experiments were first conducted on dogs, by Pavlov. He discovered that certain signal stimuli, like the sight and smell of food, are just as effective as the taste of food in evoking the salivary flow. This raised the question: Can any neutral stimulus, such as the ringing of an electric bell, be sub-

*Medical Director of the Washingtonian Hospital, Boston, Massachusetts.

stituted for the natural stimulus in arousing reflex action? In putting this problem to test, the bell was sounded and kept ringing until after the food was presented. After about 30 trials, it was found that the sounding of the bell alone was sufficient to evoke the salivary flow. Thus, a new reflex had been built up. At the same time, Pavlov found that:

1. The environment must be controlled so that all stimuli more potent biologically than the ones under test are eliminated.

2. Regarding the presentation of the stimulus, there are three possible ways of combining the neutral stimulus with the unconditioned stimulus. The bell may be sounded before presentation of food; simultaneously with the presentation of food; or after the food is given. Only the first two methods result in a conditioned reflex. For the most efficient conditioning the new "neutral" or "conditioned" stimulus must not only precede the "natural" or "unconditioned" stimulus, but it must also overlap the other in point of time.

3. The conditioned reflex will fade out gradually if the subject is exposed only to the conditioned stimulus for a long time without reinforcement by the combination of both the conditioned and unconditioned stimulus. In other words, if the ringing of the bell is used as a conditioned stimulus for a long period of time without the food (the unconditioned stimulus), the dog will finally stop secreting saliva when he hears it. Therefore, repeated reinforcements of the conditioned reflex are necessary.

Utilization of Reflex Laws

Utilized for treatment of alcohol addiction, the neutral or conditioned stimulus of the ringing bell was replaced by alcoholic beverages, the natural or unconditioned stimulus of food by an emetic. It was to be expected that, after an adequate number of conditioning sessions, the presentation of alcoholic beverages alone would provoke the same response as the emetic, (the sight, smell, taste, or even the thought of alcoholic beverages would cause nausea and emesis, or at least there would be enough

association with the treatment to prevent any desire for alcohol.)

In practice, several difficulties had to be obviated. The first experiments taught that sedatives and depressants inhibit the reflex. Thus, not only the conditioning had to be postponed until the alcohol from the last spree was eliminated and the central nervous system had recovered from the depressant action of the alcohol, but it was also necessary to time the giving of alcoholic beverages in relation to the emetic so that the ingested alcohol would be vomited before it was absorbed and before the patient became partly intoxicated (narcotized) and thus unable to develop a reflex.

Another problem was the choice of the right kind of emetic. There is a very powerful one, apomorphine, that has, however, two unfavorable after effects: A euphoric and an hypnotic one. The result of the euphoric state is that the patient, instead of feeling sick after the treatment, feels "fine," which does not promote development of the reflex of abhorrence and nausea. The hypnotic after effect may cause a sound sleep for several hours, with subsequent amnesia, which also is not conducive to the desired results.

Finally, however, after years of research and experimentation, the right kind of emetic, with all the desired properties and none of the disturbing ones, was selected and a careful and skillful technic was devised.

Technic of Treatment

Voegtlin and Lemere started this treatment more than eight years ago. In their last follow-up report on 1194 patients, they give the following results. Total abstinence was maintained in 74.8% of 644 patients treated within the last two years prior to the report; 52.5% of 291 patients treated two to four years prior to the report; and 51.5% of 259 patients treated four or more years prior to the report.

The treatment technic at the Chicago State Hospital, Chicago, Illinois, as reported by J. V. Edlin and associates applies as emetic a fluid extract of *ipecacuanha* added to the initial drink of whiskey.

The conditioned reflex treatment as given at the Washingtonian Hospital and several general hospitals in Boston differs from the technic of Lemere and his associates in the formula of the injectable solution, in the dosage and in some other technicalities. It differs from the Chicago State Hospital technic, first, in the fact that the emetic used is pure emetine, the principal alkaloid of ipecacuanha, thus discarding the remaining constituents: Cephaeline, emetamine, ipecacuanhic acid, psychotrine, methyl psychotrine and resin.*

The second difference is that the emetic is given hypodermically prior to the ingestion of the alcoholic beverage, thus causing an earlier emesis and preventing the very undesirable absorption of alcohol into the blood.

More important than the differences in technic, however, is the fact that the establishment of a conditioned reflex is only one element in a tripartite plan of treatment, the other two elements of which are a part-time protective environment with "working parole" and supplemental psychotherapy, as described below.

The conditioned reflex treatment is given in an initial series of four to eight daily sessions, followed by one-day reinforcements, at varying intervals, during the first year. These reinforcements are also the supportive framework for regular contact between the patient and the therapist. Some of my patients have requested that the reinforcements be extended over a second year in order that they may achieve a wider margin of safety. The happiness and gratification with the results of most of the "conditioned" patients is such that they are willing to return from a distance, such as Canada or Ohio, for the one-day reinforcement, not withstanding the fact that the treatment is anything but a pleasure.

For the initial series of treatments, as well as the one-day reinforcements, hospitalization is indicated. As the treat-

ment is given only to voluntary patients, any general hospital will serve the purpose.

Efficacy of the Treatment

I have applied the conditioned reflex technique to 168 patients, 147 males and 21 females. Fifty-four had the treatment in 1942, 46 in 1943, 35 in 1944 and 33 in 1945. Their ages ranged from 26 to 64. Six patients did not finish the initial series of the treatment, reducing the total number treated to 162.

Out of the 162 patients who have undergone the conditioned reflex treatment since I started it in February 1942, to the extent of the initial series alone or supplemented by a varying amount of reinforcements, 91 are still totally abstinent. 18 of them hold a 3 to 4 year record of total abstinence, 24 a 2 to 3 year record and 21 a 1 to 2 year record, making an over-all percentage of 56.1.

Sociological Aspect

The social cross-section ranged from social agency patients to men of the upper-middle class (physicians, industrial executives, chemists, etc.)

It is significant, I think, that of the 7 social agency patients who did not pay for their treatment, 5 relapsed within the first few months after the treatment. There is no follow-up information available concerning the other two.

It is, perhaps, no less significant that of the patients at the other end of the social range who had responsible and gratifying positions, there was an unproportionately high percentage of successfully treated patients.

Of the female patients, 11 relapsed and 10 became teetotalers, 3 having an abstinence record of 3-4 years, 2 a record of 2-3 years and 1 a record of 1 year and 8 months.

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*Cephaeline is an emetic, more powerful, but also more toxic than emetine. The other constituents have no pharmacological action.

Intermittent Proteinuria (Albuminuria) of Young Adults

ITS BENIGN NATURE

By IRVING J. WOLMAN, M.D., Philadelphia, Pa.

YOUNG adults often exhibit transitory intermittent proteinuria. This finding when encountered always poses the question: Does this imply kidney disease? Is nephritis or a urologic disturbance present?

We are not referring here to the minute amounts of protein which special methods reveal to be present in every normal urine. The standard technics used by clinical laboratories have been purposely fashioned to miss these minute quantities, so that normal urine will show itself as "negative for albumin." The proteinuria we are referring to is that in which, with heat or chemical tests, the reading may range from 25 mg. per 100 cc. ("faint trace") to over 500 mg. per 100 cc. ("four plus") in occasional specimens, yet be "zero" or negative a few hours later—in subjects who are clinically well, who give no nephritis or urologic history, and whose urine shows no associated red cells or casts on microscopic search.

The statements which follow are designed to serve as guides to the proper evaluation of proteinuria in individuals aged 16 to 35 years. They are derived from expert medical opinion as expressed in contemporary literature,¹ as well as from personal experiences with 22,000 healthy American young men seen at a training station for the merchant marine.²

Proteinuria is a more accurate term than albuminuria inasmuch as globulins are excreted along with the albumin in most instances.

1. Detailed studies carried out on all specimens passed over a 24 hour period will show that the excretion of protein is usually *irregular* and *discontinuous*, with more specimens being negative than positive. For example, when 110 normal physically active men were subjected to

a series of 8 separate urine tests within a 5 day period, 62 or 56% produced at least 1 protein-containing specimen, yet only 14 or 13% had protein in more than half of their specimens.

2. It follows from (1) that *proteinuria is much more prevalent in young adults than indicated by text-book statistics* compiled from random single tests. When unaccompanied by excretion of casts or red cells, or by hypertension or other clinical signs, this proteinuria is best called *intermittent*, though it is known also as *physiologic*, *periodic*, *postural*, *orthotic*, *orthostatic*, *lordotic*, *juvenile*, and *cyclic*.

3. Intermittent proteinuria can be first recognized in childhood, reaches its maximum incidence at age of 13-16, and then declines in frequency so as to be uncommon above the age of 25.

4. The simplest way of demonstrating the intermittency of such proteinuria is by the *postural* or *orthostatic* test. The subject voids 1 hour after going to bed in the evening. This specimen is discarded. In the morning immediately on rising, while still in bed, he voids again but saves this specimen. He next leans backward over the edge of the bed with feet on the floor, at a 135 angle, for ½ to 1 hour. The ensuing specimen is also collected and saved. The over-night specimen will as a rule be protein-free whereas the lordotic one will contain some protein, but with no red cells or casts in either.

5. Chronic urologic diseases, such as hydronephrosis and renal stone, often give protein-free urine. A "*negative*" urine does not necessarily exclude *serious genito-urinary disease*.

6. In contrast, for detecting nephritis, a single routine urine examination is much more dependable. In active nephritis, protein escapes practically continu-

ally into the urine, always in association with red cells and casts. (These formed structures tend to disintegrate and disappear within a few hours after voiding. For accurate work one should carry out the microscopic examination on fresh specimens.) Only with patients nearly recovered from acute nephritis or in the subclinical phase of chronic glomerulonephritis may the proteinuria of nephritis become irregular and inconstant—but even in such exceptional cases the sediment contains erythrocytes and casts. Every urine found to contain protein must therefore be subjected to a microscopic examination as well—otherwise the diagnosis of nephritis may be missed.

7. The concentration of the protein in the urine is an unreliable guide for differentiating between nephritic and other

varieties of proteinuria. Occasional cases of intermittent proteinuria which we have seen gave concentrations of urinary protein as high as 1000 mg. per 100 cc. (nephrotic values), whereas patients with chronic nephritis or urologic disease often excrete less than 200 mg. per 100 cc. ("two plus").

8. Intermittent proteinuria need be no bar to obtaining life insurance. It is a benign condition offering a good prognosis.

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Uses and Untoward Reactions of Sulfonamides in Dermatology*

By O. S. PHILPOTT, M.D.
Denver, Colorado

WHEN a new drug is introduced into medicine a physician asks "what is it used for?"—a dermatologist inquires "what kind of skin eruption does it produce?" What is said here of one of the sulfonamides in general applies to the rest of the group, unless otherwise specified.

Costell, Rubinowitz and Landy described twenty-nine dermatoses in a series of two hundred sixty-one cases where sulfonamides were administered. Their series includes dermatoses resulting from both oral and local use of the drug. Using sulfathiazole orally they reported varieties of the types of dermatoses appearing in the following order.

1. A masclar, widespread, erythematous eruption which, because of its ap-

pearance, has been called a scarlatiniform erythema.

2. Erythema nodosum with lesions quite numerous and varying in size from a pea to a dollar. These appear on the extremities, face and neck. They differ from the ordinary erythema nodosum by presenting more lesions, smaller size of lesions and complete disappearance without leaving pigmentation.

3. Urticaria which apparently has the added characteristic of becoming purpuric.

4. Angioneurotic edema.

5. and 6. Papular eczemas, particularly of the extremities and papulo-vesicular eczemas.

7. A papulo-vesicular acneform eruption which we find hard to differentiate at times from a bromide or iodine eruption.

There is rarely seen a severe and vio-

*Read before the Seventy-fourth Annual Session of the Colo. State Med. Soc., Denver, Col., Sept. 29, 1944. Notes by a Clinical Medicine staff physician.

lent pemphigus with all the unpleasant features of that disease except the eventually fatal prognosis. When the sulfonamides were first introduced we saw many cases with macular erythematous lesions only on the exposed body surfaces. We see this less frequently now and do not place the same emphasis we formerly did on photosensitization. Another untoward reaction following sulfonamide therapy in the early days of its use was agranulocytic ulceration. Fortunately, these seem much rarer now.

The diagnosis of sulfonamide skin disease is not based on any one specific finding. The character of the eruption and other clinical findings such as increased temperature, neuralgias, headaches and chills are nearly constant associations. We see conjunctivitis in many cases. Blood determination of sulfonamide concentration is of little aid in diagnosis. The amount of the drug taken or the length of time taken is also not of great aid in diagnosis because the individual cutaneous response varies greatly. Sometimes, the eruption appears within a few hours of commencing the drug, particularly where the drug has been used previously—in other cases a lapse of seven to fourteen days may occur before any cutaneous sign appears. Patch tests and intradermal tests are of negative value. In suspected cases, a white blood count may be helpful because sulfonamide intoxication usually produces a leucopenia. Premonitory sensations followed by mild constitutional reactions, with the development of one of the skin eruptions classed above, in a patient receiving a sulfonamide, should suggest the diagnosis. If there is prompt improvement when the drug is stopped, that in itself is a major diagnostic point. Disputed cases may later be proved or disapproved by a small, cautiously given dose for a therapeutic test. This, however, is not without danger of acute exacerbation of the previous eruption.

Less is known regarding the reactions to the use of the drug locally, and yet we may see any of the above conditions resulting from applying a sulfonamide to an indolent ulcer, a burn, or other local use. Intense local cutaneous sensi-

tization may occur surrounding the area being treated, or, we may see, through the process of absorption, distant effects such as edema of the lids, a generalized weeping eczema or other signs of an acute, generalized toxiderma. Bingham, Tate and Park may be referred to regarding various phases of the local use of the sulfonamides. The sensitization thus produced may be temporary or, sadly enough, may be permanent, in which case later use of the drug, for some serious overwhelming infection, may be impossible.

Treatment:

1. Immediate withdrawal of the drug.
2. Cevitamic acid in large doses is highly recommended, by some authorities.
3. Adequate liquids, to prevent if possible any urinary blockage, is important.
4. Simplification of the diet and increased elimination is desirable.
5. Cooling compresses and soothing applications are beneficial locally.

We have seen several cases of psoriasis apparently produced by the sulfonamides. It has been recognized for many years that toxic processes such as Quinzy, a streptococcal throat or similar infections may precede a first attack of psoriasis. They also can reproduce psoriatic patches in dormant psoriatics who have been free from the eruption for many months or years. At present we have no explanation for this interesting fact, but future research may make it clear.

Summary

A mild premonitory toxic reaction followed by a skin eruption which may take one of many characters, in a patient taking or having recently received sulfonamides, should suggest a diagnosis of a "Sulfonamide Dermatitis."

Oral use of the sulfonamides, in a rather high percentage of cases, may produce such eruptions.

Local use of this drug may produce a violent dermatitis at the site of the application, or, by absorption, produce a generalized toxiderma.

A variety of psoriasis may result from the taking of the sulfonamides.

Rheumatic Fever IX: Prerequisites for Tonsillectomy*

By HAROLD L. HICKEY, M.D., Children's Hospital, Denver, Colorado

1. The sedimentation rate should be in the normal range.

2. Tonsillectomy is rarely necessary under the age of three, as lymphoid tissue is necessary for growth and development. There is less chance for regrowth if the tonsillectomy is performed at age four or older.

3. History—don't take the parents' word for it. If sore throat is mentioned, ask if the child was kept out of school because of it. Ask if fever was present (fever is always present in tonsillitis), if the child was sick, if the glands under the chin or jaw became enlarged if the tonsils were red and swollen.

4. Examination of the throat: (1) If material is retained in the crypts tonsillectomy should be performed, as streptococci may be found beneath the retained material. (2) If the anterior pillar

is reddened and a history of tonsillitis given, tonsillectomy is indicated.

5. Adenoid enlargement should be considered if there is obstruction to nasal breathing and the typical adenoid facies is present, or if there is history of recurrent otitis media.

6. Scarlet fever patients almost always have chronic infected tonsils. Diphtheria carriers may be cleared up by tonsillectomy after negative cultures have been obtained within 24 hours after tonsillectomy.

7. The adenoids may be examined with a mirror in older children. In small children they may be felt with the finger. The child's arms and legs are wrapped snugly in a blanket, his head held toward the physician, his cheek pushed between the teeth and the finger inserted behind the soft palate to palpate the adenoids.

Rheumatic Fever X: Differential Diagnosis of Brucellosis*

By WARD DARLEY, M.D., University of Colorado, Denver, Colorado

ACUTE brucellosis is not seen commonly and may be confused with acute rheumatic fever. The onset is similar, with fever, sweating, tachycardia, flushing, and generalized aching pains. Early in the course of the disease it may be difficult to diagnosis. Acute brucellosis is uncommon in children; rheumatic fever is most common in children. Acute brucellosis may act like a streptococcal infection and may present an acute joint picture during convalescence, which may also resemble a serum sickness. The prognosis is good, and joints are normal, usually, within one week.

There may be a variation in the clinical picture of acute brucellosis due to the various types of organisms. The

clinical picture may resemble osteomyelitis, septic arthritis, or acute spondylitis (resembling typhoid spine).

Diagnosis

1. Think of it.
2. A positive blood culture in the early phase of the disease is the only positive method of making a diagnosis.
3. Agglutination tests are not positive early in the disease. By the time agglutination is positive the patient is improved.
4. Opsonic index: The usefulness of this test is doubted.
5. Skin test: Only for brucella sensitivity, just as the tuberculin test indicates tubercule sensitivity. A positive skin test is frequently associated with a previous infection which may have been so light as to have been unrecognized. The focus may be active or it may not be.

*Clinical Medicine staff notes taken at a Rheumatic Fever Refresher Course, University of Colorado, June 1945.

Chronic Brucellosis

Aches and pains result from involvement of the neuro-muscular system. There may be a simultaneous tuberculous infection.

The diagnosis is often difficult. Many subjective complaints are present. Heart function is usually normal. The sedimentation rate is normal in both acute and chronic brucellosis. The red blood and white blood cell counts are normal with a possible increase in lymphocytes. Agglutination usually occurs between 1 and 80. The opsonic index is negative as there is no patient immunity. The blood culture is usually negative as are cultures of the cervix, urine, teeth, and tonsils. The skin test is usually positive, but ten per cent of persons with chronic brucellosis have

a negative skin test. The skin test is of more value in children. The diagnosis is less complicated in children.

The diagnosis must be made on clinical evidence. One should eliminate all other causes of symptoms. Psychoneurosis may result in the same symptoms that result in chronic brucellosis, including aching, headaches, and tenseness. A mental status test should be performed.

Rarely does chronic brucellosis follow acute brucellosis, at least in the western United States.

The skin test may result in increased agglutination, increased phagocytic index number, and possibly a general reaction and fever, although these patients may not have chronic brucellosis.

Chronic brucellosis may be a factor in causing ill health.

Local Anesthesia for Cervical Operations

Amputation, repair, conization or cauterization of the cervix or dilatation and curettage can be performed under local anesthesia. For cauterization, the procaine solution can be injected directly

into the cervix with a luer-lok syringe and small gauge spinal needle, or for any of these procedures local anesthetic solutions (procaine 1 percent with several drops of adrenalin per 50 cc.) can be injected into the paracervical tissues.

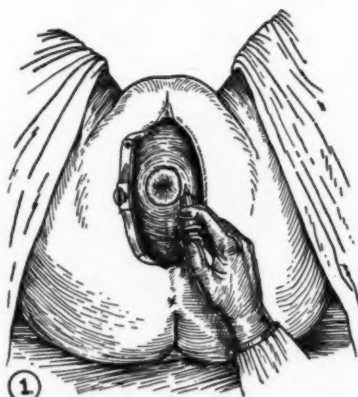


Fig. 1 indicates the technic for office cervical anesthesia. The vulva are scrubbed with soap and water, aqueous merthiolate or mercurochrome is injected with a rubber bulb syringe into the vagina, a sterile syringe is inserted and the vagina painted with sterile aqueous solution.

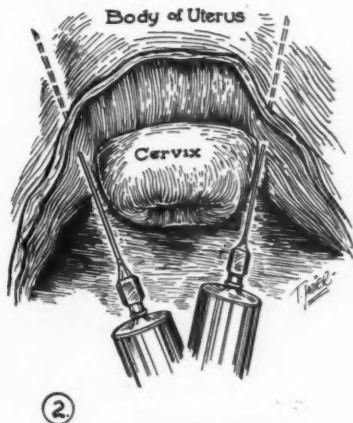


Fig. 2. A luer-lok syringe and a long, flexible needle such as a (20 or 22 gauge spinal puncture needle) is used to inject a total of 50 cc. of one percent procaine solution into the parametrial tissues lateral to the cervix. The needle is slowly introduced while the injection is being given. Anesthesia appears in 10 minutes. (Illustrations adapted from Dogliotti and Hertzler).

Rectal Obstruction in Infants

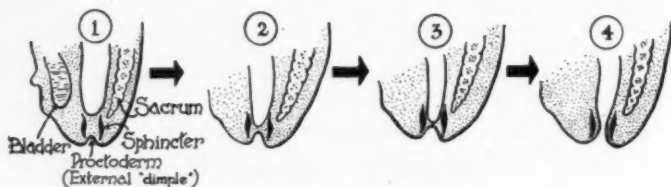
The Fussy, Crying Baby

Straining or crying at stool, colicky abdominal pains, abdominal distention, ribbon-like stools, small frequent stools, constipation, dribbling of meconium or no stools at all—any one of these call for insertion of a finger into the baby's anus.

Development of the anus is represented

by Figures 1 to 4 showing various stages in development (adapted from Patton). This process may stop at any stage, thus resulting in complete or partial obstruction of the rectum.

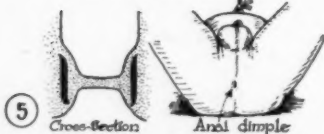
Every newborn baby should be examined rectally.



Development of the Anus

VARIETIES OF ANAL OBSTRUCTION

Anal Membrane



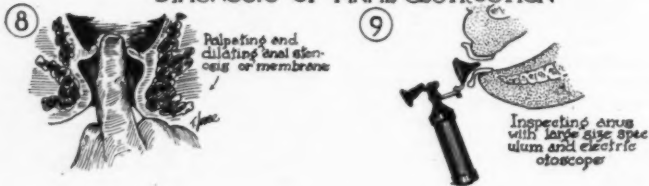
Congenital Stenosis



Congenital Stenosis



DIAGNOSIS OF ANAL OBSTRUCTION



Rectal Obstruction in Infants

The most common condition is a partial obstruction or narrowing of the rectum, which is readily dilated with the finger (Fig. 6, 7, 8). The rectum may be inspected with an electric otoscope, employing a large speculum (Fig. 9). The dilations may be repeated weekly, if necessary.

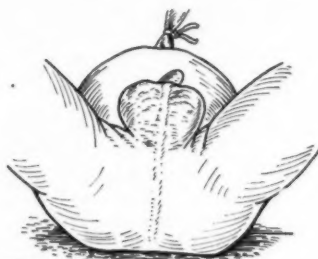
If the finger enters the anus but cannot be inserted into the rectum, an anal membrane is present (Fig. 5). This should be incised crucially and the edges trimmed off.

If only an anal dimple (Fig. 1) exists, or if there is no structure on the perineum, the rectum ends in a blind pouch. The baby should be inverted, and an

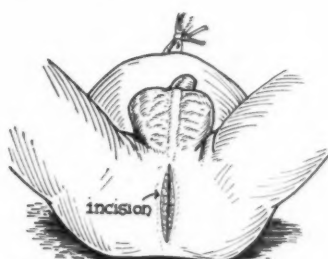
x-ray taken with the hips high; any gas in the bowel will pass to the blind end which may be visualized on the roentgenogram (Wangensteen).

One incises anteroposteriorly over the usual site of the anus, then bluntly dissects for the pouch, which is brought up into the wound, opened and sutured into position (Fig. 10 to 13).

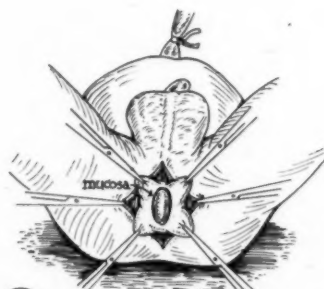
Material adapted from Edwin F. Patton (Proctologic Problems of the Pediatrician in *Journal of Pediatrics*, Dec. 1945), Harry Bacon ("Anus, Rectum and Sigmoid Colon," published by Lippincott) and suggestions by Irving Wolman, pediatrician, St. Christopher's Hospital, Philadelphia.



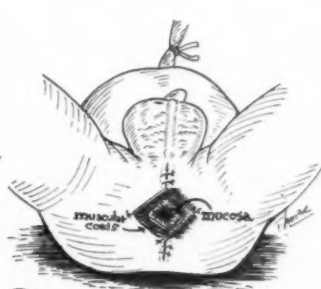
10 Perineum without anal dimple



11 An antero-posterior incision is made in the midline as illustrated



12 The pouch has been brought down and held fast with hemostats



13 The pouch has been slit open and the edges sutured to the skin as shown

Misdiagnosed Abdominal Injury

A man of 42 was forcefully kicked in the abdomen. He lived for 13 days thereafter. At first there was vomiting of brown material and severe abdominal pain, accompanied by shock and marked abdominal rigidity, very weak and irregular pulse. A surgical consultant saw the patient and made a diagnosis of intra-abdominal injury but advised against exploration because of severe shock and imperceptible pulse.

After three days of supportive treatment, the pulse became stronger and the rigidity decreased. At the end of a week, the patient was improved, but was not operated upon because he "was retaining fluids by mouth" (doctor's note, not the nurse's) and because the rigidity was much less.

He then began to decline, the rigidity recurred, followed by distention and death.

Autopsy disclosed the pathologic picture roughly sketched in Fig. 1. A large

firm hematoma was present in the duodenal wall, due to rupture of a small artery. All the tissues of the abdominal cavity were bile stained. Just below the hematoma, was a rupture of the duodenum 1 inch in length which led into the lesser peritoneal cavity, behind the stomach (Fig. 2). The lesser peritoneal sac contained purulent material. Apparently, the pus in the lesser peritoneal cavity had just recently broken into the general peritoneal cavity, resulting in generalized peritonitis.

("Fluids being retained," when given orally, is a misnomer. Severe or fatal gastric dilatation was not uncommon in the older days before use of inlying gastric or duodenal tubes. If this patient had had constant suction on a duodenal tube, no material would have entered the lesser peritoneal sac and peritonitis would not have followed. Ed.)

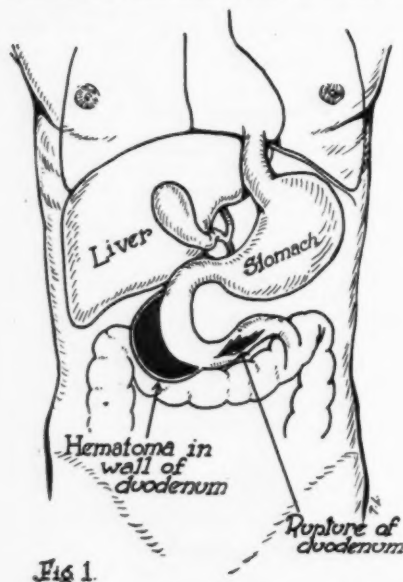


Fig. 1.

Fig. 1. Autopsy disclosing the large hard hematoma in the duodenal wall and the ruptured duodenum which permitted duodenal contents to enter the lesser peritoneal sac.

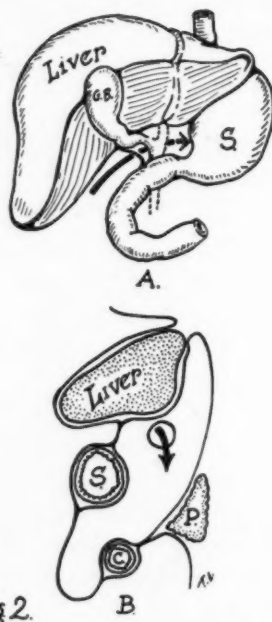


Fig. 2.

Fig. 2. The lesser peritoneal sac is normally entered by the Foramen of Winslow posteriorly. S—stomach; P—pancreas; G.B.—gall-bladder; C—colon.

EDITORIALS

Antivivisectionists

A. C. IVY, Ph.D., M.D.*

Within a year state and local medical societies have had to defeat Antivivisection Bills in the District of Columbia, New York State, Maryland, Pennsylvania, Massachusetts, and Illinois. Recent news indicates that Antivivisection Bills are on the legislative horizon in California, in Ohio, and in New York State again.

It cost more than \$25,000 to defeat the Antivivisection Bill in New York State. It cost at least that much to defeat the Bills in other states. It cost almost as much to defeat the Bill in California several years ago. The cost in time expended by physicians and medical scientists is not included.

This is a tragic and ridiculous situation in view of the following facts: (1) *Most of the progress made in medicine in the last century has directly or indirectly come from animal experimentation.* (2) One hundred years ago the average life expectancy was forty years; today it is sixty-five years. This means that there are twenty-two million people above the age of 45 years living today in the United States who owe their life to the medical progress that has been made since 1850. (3) In World War I, 9 per cent of the wounded died. In World War II only 3 per cent died. This means that the life of 48,000 veterans has been saved as a result of the medical progress that has been made since World War I. (4) There are 17,000,000 people living in the United States today whose lives will be prolonged as the result of a single medical discovery, namely, insulin. (5) There is not a person living in the United States today whose life is not directly benefited by the discoveries of medical science. (6) Practically every remedy known to veterinary medicine has been established or discovered through animal experimentation.

The Antivivisectionists, of course,

*From the Department of Physiology, Northwestern University Medical School, Chicago



have contributed nothing to our knowledge of the cause, control, or cure of disease in man and animal. They would abolish the only method known to biology for the discovery of the cause, control and cure of disease. If they had their way, they would persuade legislators and the public to abolish this method and condemn to death every person, living and unborn, who will contract a disease, the cause and cure of which is now unknown. *Animal experimentation is the only method by which random and unnecessary experimentation on man can be avoided.* It is the only method available for making basic discoveries in biological science from which flow most of our modern medical benefits.

Legislators and the public are vulnerable to the false, sentimental appeal, the misrepresentation of Antivivisectionists and their paid secretaries and press. The layman is vulnerable because he does not know the truth; the majority of laymen are biologically illiterate. Leg-

islaters, unless informed and political pressure is brought to bear on them, would pass and have passed Antivivisection legislation. And, then when disease threatens the people and animals in a community, the same legislators would appeal to the physicians and medical science for aid and condemn them if it were not forthcoming.

An informed legislative assembly or an informed public will never abolish animal experimentation. They will not listen to the imaginary ravings of antivivisectionists. They will not believe the lies of Antivivisectionists, lies based on biological illiteracy in most cases but in many other cases on the writings of trained writers and secretaries who will write and perform for any cause, for a fee.

Education of the public and legislators, regarding the source of their medical blessings, is the chief solution of this problem.

This has become imperative for several reasons.

First, the Hearst press has adopted Antivivisection as a national editorial policy. Prior to 1935, this press confined its activities to California, where in 1918-19 an antivivisection law was up for referendum. The members of the State Medical Society and Dr. Whipple and his colleagues had to "stump the state." Antivivisection was barely defeated by a 2 to 1 vote. Since 1935 the Hearst press has backed or initiated legislation in many states.

Second, there are in our country at least 100 Antivivisection Societies, though some have a different name, which are constantly, in various ways, hampering animal experimentation. Their paid secretaries are feathering their nest by obtaining legacies, the total of which has not been ascertained.

Third, when a new discovery in the Zoological and Medical Sciences is announced and publicized, it is exceedingly rare that the source of the discovery namely, animal experimentation, is acknowledged. A method has no "news value"; it has no "press appeal"; it has no "emotional or sentimental appeal." Many parents whose children have been saved by diphtheria antitoxin, insulin, and other medications, do not know that

animal experimentation was used; and such parents too frequently contribute to Antivivisection Societies.

Adults whose lives have been saved by blood transfusion, plasma, epinephrine, and so on, also are known to contribute to and to support Antivivisection. Soldiers and sailors, who have been wounded or burned and have received the remedies of medical science skillfully administered by physicians and surgeons trained on the basis of the experimental method, and using operations developed on anesthetized dogs, speak out for Antivivisection. More recently the public has been falsely informed in the antivivisection press that animal experimentation was not used in the discovery of the sulfa-drugs, penicillin and streptomycin. When a "Doctor" is quoted or speaks in support of Antivivisection his ethical breaches with the medical profession are not indicated.

Fourth, biological illiteracy is fertile soil for false, harmful and malicious antimicrobial propaganda. Otherwise intelligent laymen are aroused by the malignant and clever antimicrobial propaganda of Antivivisectionists. Even some nurses are aroused, since in their limited courses only facts are presented. The history of the discovery of the diagnostic and therapeutic methods used by physicians on the patients to whom they minister are frequently not presented to nurses. How many lay people, nurses and even physicians, know that the work of the physiologist Galvani is behind the use of every electrical instrument, including the electric light? His studies on what he called "animal electricity" provoked the physicist Volta to produce the voltaic cell.

The word "Doctor" means "teacher." To teach is a duty of those who know. The word physician originally meant an experimentalist in natural philosophy, later "a healer." The "Doctor of Medicine," a physician, is historically by appellation a teacher and a healer. The Doctor of Medicine thus has the responsibility of teaching as well as healing.

If the profession is to progress in its capacity to heal and to teach, it must preserve the experimental method, the method of controlled observation, or the chief means of progress of every science.

As indicated above, the healing of patients and the prevention of disease is not enough to prevent the passage of Antivivisection legislation. In addition, the public and legislators must be taught how medical knowledge is obtained.

There are two ways to teach, namely, the institutional and the individual methods. The most effective method is a combination of both. Both these methods will have to be used to combat the influence of antivivisection.

The National Society for Medical Research has recently been organized as an institution to undertake the education of the public regarding the necessity, the humane character, and the accomplishments of animal experimentation. It was organized by the Association of American Medical Colleges, because of the serious challenge which now confronts the profession as a result of the false and malicious activities of the Hearst press. The membership of the Society will consist of contributing and non-contributing members. A professional public relations staff has been organized and will start an educational program at all levels, since the common man, the high school teacher, as well as the college professor, too frequently have either no information or misinformation on the subject of animal experimentation. It is not their fault because the only information they have available to them, other than a few books in the libraries, is the false information they receive from pamphlets of Antivivisection Societies and the lurid articles and editorials in the Hearst press.

However effective the National Society may be, it cannot be as effective as the individual instruction which the physician can impart casually in a few words to a patient. Every physician should share the responsibility of educating the public regarding the necessity, the humane nature, and the accomplishments of animal experimentation.

The most effective way of educating the public, if it could be practically accomplished, would be to label all the products and practical values which have resulted from animal experimentation, as follows:

The Monthly Water Bill: To carry the statement, "The freedom of this water

from typhoid organisms has been assured by the results of animal experimentation."

Many Packaged Food Items: To carry the statement, "The nutritional or vitamin values of this food have been determined or are based on the results of animal experimentation."

Life Insurance Policies: To carry the statement, "The premium on this policy would have to be twice as much if experiments on animals had not shown the way to increase the average life span."

All Packages of Drugs: To carry the statement: (a) "This drug represents a contribution of animal experimentation"; (b) "The non-toxicity of the dose of the drug recommended by the physician has been assured by animal experimentation"; (c) "The potency of this product is assured by assay on animals."

Every physician's prescription to carry a statement, such as: "Much that I have done to assist you to get well is based on the results of animal experimentation."

These suggestions are absurd and ridiculous. But, they are no more absurd and ridiculous than:

(1) Many of the laws now on our statute books;

(2) The Antivivisection law in Maine;

(3) The actions of a member of the Chicago Mayor's Committee to regulate animal experimentation in Chicago;

(4) The fact that the proposed Antivivisection legislation in California was defeated only by a 2 to 1 vote, and another vote is threatened;

(5) The fact that every State in the Union would have an Antivivisection law, if it had not been opposed;

(6) The fact that some scientists and physicians must spend a number of days every year in combating Antivivisection legislation, refuting the lies and misrepresentations of the Antivivisectionistic malfactors of human welfare; and

(7) That Antivivisectionists have hampered the medical research and teaching of the majority of the medical schools in our Country.

The only way to render them ineffective is to thoroughly educate the public.



CLINICAL NOTES AND ABSTRACTS

Sclerotherapy

Rectal Fissure

In the absence of internal hemorrhoids, the walls of a rectal fissure are injected with Moru-quin, using from 0.5 to 1 cc. The area is anesthetized with procaine solution. From 1 to 4 weekly treatments are usually required.

Fistula in Ano

After establishing drainage of the fistulous tract, it is probed with a cannula needle and from 3 to 5 c.c. of Moru-quin is injected through the cannula, and the fistulous canal is thus ballooned by the injection. Three to five treatments usually produce closure of the tract.

Warts and Papillomas

Verrucas have been treated by numerous remedies. Injection treatment is especially suitable for the plantar and palmar types. A few drops of sodiumiodobismuthite are injected into the base of the wart. The wart will turn black in 24 hours. You may use sodium morphuate or quinine preparation with good results.

By injection of the pedicle, the nutrition of a papilloma is cut off and a cure results. From 1 to 3 minims of quinine and urethane solution are injected into the pedicle until blanching results. Shrivelling of the growth follows rapidly.

Hernias in Infancy and Childhood

Umbilical as well as inguinal hernias can be treated by sclerotherapy. In this age group there should be few failures, and therefore the injection treatment is generally the treatment of choice. The technic does not vary from that in the adult, except that fewer treatments are

required because fibroblastic proliferation is much more easily obtained.

Umbilical hernias that do not respond to ordinary strapping can be readily controlled by the use of hernial sclerosing solutions injected into the margins of the defect. Adhesive strapping or a well-fitting umbilical truss should be used in conjunction with the injection treatment.

Hernias in Adults

Injection treatment of hernias causes adhesions to form between fascial planes. Preferred solutions are Monolate or Neogaltanol.

In indirect hernia, the injections are concentrated on the internal ring. The needle is passed through the aponeurosis of the external oblique and the muscle beneath it, until it reaches the transversalis fascia. From 1 to 3 c.c. of solution is deposited with each injection. Successive injections are placed along the inguinal canal, and finally around the external ring.

In direct hernia, injections are focused around the region of the conjoined tendon. The average number of injections required is 15. A truss is worn constantly during the course of the injections.

Bursitis and Ganglion

In the absence of infection, the bursa is injected with a large-bore needle. Injection of the sclerosing agent follows immediately. Solutions used are Synsalsol, Moru-quin, or quinine and urethane, 1 to 3 c.c., depending upon the size of the bursa. One may lean toward under-treatment and, if necessary, repeat the injection.

Ganglion (usually on the dorsum of the hand or wrist) has thick contents,

requiring a cannula for aspiration, following which 2 to 5 c.c. of Sylnasol or Moru-quin are injected. The resulting swelling subsides gradually.

Spermatocele

Generally one injection of quinine and urethane solution is sufficient to cure.

Hydrocele

Treatment consists of draining off the fluid through a 19 or 21-gage needle and, with the needle in place, injecting the sclerosing agent, sealing the puncture with colodion. Two per cent procaine should be first injected. Then Sylnasol 1 to 5 c.c., depending upon the size of the sac. Moru-quin, in from 1 to 3 c.c. quantities, also works nicely. The hydrocele will swell to the original or even a larger size, with thickening of the wall so that fluctuation is no longer obtained. A suspensory should be worn until the mass subsides, in from 2 to 3 months. —A. CHALMERS HOPE, M.D., in *Southern Med. and Surg.* Charlotte, N.C.

Procaine Intravenously for Serum Sickness

The intravenous injection over a 2 hour period of 1 Gm. (15gr.) of procaine diluted with 500 cc. of physiologic saline solution relieves serum sickness and some cases of urticaria. This treatment may be of value in conditions associated with spasm of vessels (Raynaud's disease, Buerger's disease, arteriosclerosis with superimposed vasospasm, angina pectoris and thrombophlebitis). —O. H. WANGENSTEIN, M.D. in *J.A.M.A.*, Apr. 13, 1946.

Veterans as Blood Donors

For practical purposes all the millions of Americans who have lived in the malarial areas during the last years are eliminated as safe blood donors for an indefinite period of years. This applies even to refrigerator stored blood.

A donor does not have to be suffering from a clinical attack of malaria to transmit it when his blood is given to another. It may have been latent for years and he may never have had a definitely recognized attack. —CHESTER W. LAWSON, M.D., *Jrnl. Lancet*, July, 1943.

The Tired Patient

Patients suffering from psychomotor inhibition complain of feeling tired, of not being able to get started on their daily tasks, and of an abnormal inclination to procrastinate. They make up their minds that they are going to do a certain thing but they never seem to get to it. Everything seems too big for them. The housewife tells us that daily chores which formerly were performed with a routine automaticity now loom up as jobs impossible of accomplishment. The businessman tells us that he cannot get started on the mass of routine material that awaits him when he sits down at his desk in the morning.

In most patients this inhibition is worse in the morning, and, in spite of the fact that they may sleep well (with or without sedatives) they awaken in the morning unrefreshed. In many cases this inhibition tends to diminish as the day goes on. One of the key questions is: "What time of the day do you feel the most tired?" If the answer is "in the morning, but toward evening I always begin to feel better," we suspect immediately that the patient is suffering from some form of depression. With others, however, the inhibition persists through all the waking hours and they say that they are always "all tired out."

From an examination of the patient's history, it soon becomes obvious that work, of itself, does not lead to this chronic condition; neither is the feeling relieved by rest. *Treatment:* The first portion of treatment is to give the patient permission to be sick. The knowledge that he at last has found somebody who realizes that there is actually something wrong with him is of great therapeutic importance.

Next the patient should be put on a rigid activity schedule and made to follow it. He should retire and rise at exactly the same time each day. He should lie down for exactly one hour after the noon meal. He should go for a walk every morning and every afternoon. The lengths of these walks should be systematically increased according to an exact schedule until the patient is walking three hours a day. At first, work and social activities are prohibited, but later in the program, they may be taken

up gradually. Psychotherapeutic interviews may be given.

Some patients gain strength when given two teaspoons of glucose (dextrose) in 8 ounces of orange juice four times a day. Small doses of ephedrine sulphate may be necessary.

In patients who are not relieved by the sugar and orange juice, a diet high in protein, mildly high in fat, and relatively high in carbohydrate may be given together with 1/200 to 1/150 gr. atropine sulfate three times a day, one-half hour before meals.—G. R. KAMMAN, M.D., *Jrnl.—Lancet*, July, 1945.

Cardiac Irregularities

There are four common cardiac irregularities: 1. sinus tachycardia; 2. premature contractions; 3. paroxysmal tachycardia and; 4. auricular fibrillation.

1. *Sinus tachycardia*: Change in pulse rate on respiration; usually occurs in children and young adults; is accentuated by deep breathing (thus aiding in the diagnosis).

Sinus tachycardia may result in palpitation, restlessness, agitation, breathlessness (not true dyspnea), and precordial pain. These patients are not suffering from cardiac disease or hyperthyroidism. Sedatives are most useful in therapy: digitalis is not.

2. *Premature contractions*: Extra-systoles are frequently heard in normal and abnormal hearts; the patient complains of the heart "jumping," "flopping," or "turning over." It is not a sign of heart disease. If no signs of heart disease (enlargement of the heart, diastolic murmurs, etc) are found, strongly inform the patient that the heart is normal. Fatigue, worry, tobacco and foci of infection may cause premature contractions in a normal heart.

Quinidine (3 gr. every 4 hours) should be used when extra-systoles occur following a coronary occlusion. Digitalis may cause extra-systoles if given in excess.

3. *Paroxysmal tachycardia*: Characterized by sudden onset and termination, and by great regularity; relatively few attacks are seen by physicians because they usually cease spontaneously or are stopped by methods patients have learned to adopt. Treatment: Forceful

attempts to breathe out, carotid sinus pressure, pressure on eyeballs, induced vomiting, change of position, expelling flatus. If drugs are needed, give quinidine, 3 to 5 gr. two to four times daily. Usually, it occurs in normal hearts. Ventricular paroxysmal tachycardia usually occurs in organically damaged hearts.

4. *Auricular fibrillation*: The most frequent and persistent of all arrhythmias; usually due to rheumatic heart disease or degenerative heart disease. Diagnosis: Discrepancy in apex rate and pulse rate at wrist; in checking the blood pressure, there is no definite systolic sound but rather an irregular group of beats at different systolic levels.

The heart rate is usually above 120 per minute and is totally irregular in force and rhythm. With a rate of 70 or 80, auricular fibrillation is often mistaken for sinus arrhythmia, premature beats or even normal rhythm. No specific treatment is necessary in such low rates, but digitalis should not be stopped because the rhythm seems "nearly regular" of normal rate.

Digitalis is very effective in auricular fibrillation, especially in younger persons.

5. *Heart block*: The one serious arrhythmia is complete heart block of organic nature (slow rate of 35 to 40 per minute).—R. O. GOEL, M.D. (Grand Forks, N. D.) in *Journal-Lancet*, Nov. 1945.

Prolonged Influenzal Fever

The most common cause of a continuation or recurrence of fever in influenza after the sixth day is the extension of the infection downwards to the lower respiratory tract. Secondary pathogenic invaders (*H. influenzae*, *Micrococcus catarrhalis*, *pneumococcus*, *streptococcus viridans* or *hemolyticus*, or *Staphylococcus*) may cause bronchitis, bronchiolitis or pneumonia.

Treatment: Oxygen, sulfonamides or penicillin, steam inhalations, no sedatives which will diminish the cough reflex and render the patient unable to cough up mucus plugs blocking the smaller bronchi. If pleural fluid develops, aspirate it and inject 20,000 units of penicillin into the pleural cavity. — F. G.

LESCHER, M.D. in *Practitioner*, Dec. 1944 (England).

Treatment of Bronchial Asthma

1. Specific methods give best results.

a. Elimination of all exciting factors; dog hair, egg, wheat and orris root must be thoroughly removed.

b. Desensitization (Hyposensitization) is needed for important substances which cannot be completely removed. Increasing amounts of these antigens are given. (1) Subcutaneously: Animal derivatives, orris root, house dust, pollens, molds. (2) Orally: Egg, wheat, and milk.

2. Non-specific methods give relief of symptoms.

a. Epinephrine

1:1,000 subcutaneously or intravenously.

1:100 inhalant (spray).

1:500 oil. (Intramuscularly).

b. Ephedrine orally for mild attacks.

c. Aminophyllin; intravenously in 3 ¾ gr. doses.

d. Vaccines; stock, and autogenous.

e. Glucose; rectally.

f. Fever treatment.

g. X-Ray.

h. Hospitalization in asthma room with air filter and covered mattress and pillows.

i. Reassure patient.

3. Preventive Treatment.

a. Children of allergic parents are potentially allergic; shield from most common causes (animals, orris root, feathers, excess amount of pollen, such as at summer camps).

b. Mild Symptoms

Eczema, bronchitis, mild asthma should be treated by complete skin tests and offending antigens eliminated. Desensitization if necessary.

c. Allergic individuals should not intermarry.

—L. UNGER, M.D. Chicago, Ill. American College of Allergy, Intensive Course, November, 1945.

Medication for Arthritis

Sodium sulfate (Glauber's salt) is perhaps the most important of all internal drugs for arthritis and allied conditions. The dose is 15 to 20 Gms., or a heaping

tablespoon, in ½ pint of water, to be taken before breakfast.

Potassium tartrate is a laxative but also it has a resolvent, anti-arthritis and antiphlogistic action. Dose: 15 to 20 Gms., (heaping tablespoon) in plain, carbonated or sweetened water.

Strong counterirritation often relieves pain of arthritis and neuralgia in a few days. Mild irritants include oil of wintergreen, turpentine, camphor oil and camphorated alcohol. Stronger external applications include mustard oil or plaster, benzine and balsam of peru (they redden the skin on short application and blister it by prolonged application or in higher concentrations). Vesicants include croton oil, tartar emetic (4 to 20% ointments and cantharides. — BERNARD ASCHER, M.D. in "Treatment of Arthritis and Rheumatism in General Practice" (Froben Press).

Diabetic Axioms

1. A normal fasting blood sugar is a common occurrence in frank diabetes in young people, particularly in the first months of the disease.

2. Diabetes diagnosed early responds well to treatment, with a moderately restricted diet, and insulin where necessary.

3. Crystalline and protamine zinc insulin are better injected with separate syringes.

4. Insulin should be given in multiples of 4, as 12 units or 16 units, as it is more easily registered on the syringe. We prefer patients to use a 1 cc. syringe divided into tenths.

5. Discomfort, comparatively little pain, and only slight fever are characteristic features of diabetes with infections. Localized collections of pus may give few symptoms and may require aspiration with a needle to confirm their presence.

6. Coma versus appendicitis: The premonitory symptoms of diabetic coma may simulate those of appendicitis, and the leukocytosis, common to both, further complicates the picture. If there is a reasonable doubt, after study and diabetic treatment for a few hours, appendectomy should be performed.

7. Preventing death from diabetic coma: All cases of diabetic coma should

be treated by: 1. Insulin (because patients who have sufficient insulin never develop coma); 2. Physiological salt solution intravenously until dehydration is corrected; 3. Gastric lavage to prevent gastric dilatation; 4. Good nursing care. Whenever we hear of a diabetic coma death, we look to see if glucose or alkali was administered. Only 2 deaths have occurred out of 122 cases of coma treated by us in the last 4 years, one due to coronary thrombosis and one to osteomyelitis.

8. Chronic nephritis develops in a number of children who have disregarded dietary rules and who have lived only by the grace of insulin.—ELLIS P. JOSLIN, M.D., *Med. Clin. N. Am.*, Sept. 1944.

The Pneumonias: Modern Aspects

Diagnosing the type: Onset with a severe chill, cough, sharp pleuritic pain and characteristic rusty sputum may signify a pneumococcal pneumonia. A severe sore throat followed by presternal soreness and marked toxemia, is typical of streptococcal pneumonias, occasionally of the staphylococcal pneumonia (which may follow influenza virus infections). Friedländer's pneumonia occurs chiefly in old persons and those with chronic respiratory tract infection, as a severe, rapidly progressing pneumonia accompanied by gelatinous, stringy, dark brown sputum loaded with the characteristic encapsulated bacilli.

Treatment: Sulfonamides are usually effective for pneumococcal and hemolytic streptococcal pneumonias; penicillin is more effective in severer forms. Staphylococcal pneumonias are best treated with penicillin, as sulfonamides are only moderately effective.

Friedländer's and influenza virus pneumonia are treated with intensive, prolonged sulfadiazine therapy. Deaths ascribed to influenza are usually the result of bacterial pneumonia, which should be treated early and intensively.

Pneumococcal pneumonias: Penicillin is given in doses of 25,000 units every 3 hours until fever disappears, then continued in smaller doses until 2 days after clinical improvement appears.

Staphylococcal pneumonias: Intensive, prolonged treatment up to 25,000 units

every 2 hours, as localized abscesses tend to form.

Empyema: Withdraw pleural fluid as soon as possible and instill penicillin into pleural cavity.

Oxygen is used for rapid or difficult breathing, cyanosis or tachycardia. Don't oversedate the pneumonia patient.—MAXWELL FINLAND, M.D. in "Doctors Talk It Over," Jan. 29, 1946.

Treatment of Amenorrhea

Cause	Treatment
1. Ovarian	1. Ovarian
a. Corpus luteum cysts	a. Remove cysts.
b. Follicular cysts secreting too much estrogen	b.
c. Fibrosis of ovary	c. Resection of fibrous capsule.
d. Ovarian tumors	d. Remove tumors.
2. Nutritional: Lack of B complex, or sufficient amounts of food.	2. Give vitamin B complex and full balanced diet.
3. Obesity	3. Gradual reducing diet, with amphetamine sulphate, 5 mg. before meals; ask about psychic causes for eating.
4. a. Thyroid deficiency	4. a. Thyroid extract orally.
b. Hyperthyroidism	b. Removal of thyroid.
5. Psychic: Fear of pregnancy or menses, emotional upsets.	5. Reassurance; injections of progestin methylsulphate daily for 3 days; thorough examination.

Estrogen therapy: Oral stilbestrol (or hexestrol, benzestrol, estrone, estradiol) in doses of 10 to 30 mg. daily over a 20 day period will result in bleeding, after a latent period of 8 to 14 days. If ineffective, give 40 to 60 mg. daily. After the bleeding episode, give a second and third course, and then let the patient go without treatment for several months to see if normal menstruation will appear.—S. CHARLES FREED, M.D. (Mt. Zion Hospital, San Francisco) in *West. J. Surg., Ob. & Gyn.*

Pain and the Esophagus

Pain is often one of the earliest manifestations of disease of the esophagus, but if not associated with dysphagia (painful swallowing), it is often misinterpreted as functional in origin, as the pain is often at a considerable distance from the esophageal lesion.

The pain of esophageal cancer may

be mild and burning in type or may be so severe that morphine is required. The distress is usually situated over the midline of the thorax, may extend into the back, or may be referred to the abdomen, face or neck, and not infrequently down the arms.—A. C. CLASEN, M.D. in *Hawaii M. J.*, July-Aug. 1945.

[The patient with "angina pectoris" should be carefully studied to make sure that he does not really suffer from esophageal disease, hernia of the stomach up through the diaphragm (hiatus hernia) or arthritis of the cervical vertebra.—Ed.]

Gastric Ulcer vs. Carcinoma

1. A history of previous digestive pain similar to the one now being experienced is suggestive of a recurring benign lesion.

2. Spontaneous remission of symptoms occur in non-perforating peptic ulcers, even without any special treatment; cancer symptoms rarely subside and usually appear as a long-continued distress, recurring day after day, for weeks and months.

3. Massive hemorrhage usually indicates a benign lesion.

4. If occult blood is consistently found in the stool of a patient with a gastric or intestinal lesion, cancer should be sought for. Bleeding from a benign lesion usually stops and does not recur until the next episode of hemorrhage.

5. The more deeply an ulcer penetrates beyond the stomach wall, the greater the probability that it is benign.

6. Gastric carcinoma completely effaces or replaces with marked nodularity the normal gastric folds, on roentgen examination. Benign ulcer of the stomach causes the mucosa to be thrown into radiating folds and preserves fairly well the normal pattern of gastric mucosa.

7. *Meniscus sign*: A malignant lesion usually grows into the stomach. If this lesion ulcerates, the niche occurs on the elevation of the tumor. The niche may be seen as a crater surrounded by a translucent halo of piled up malignant tissue, constituting the pathognomonic sign of gastric cancer.

8. Gastric spasm of the greater curva-

ture is often produced by benign ulcers; if marked spasm is present, the lesion is usually benign.

9. Gastroscopy is valuable if the lesion can be seen: Benign lesions are sharp, clean and hyperemic with normal peristalsis; malignant lesions jagged, irregular, infiltrated, nodular and without peristalsis.

10. Surgical removal is occasionally needed to make the diagnosis.

—HENRY TUMEN, M.D., in *Penn. S.J.M.*, Mar. 1946.

Pleural Fluid

Fluid in the pleural cavity always signifies a serious organic disease. Diagnosis of the cause is based upon observation, chest puncture, study of the pleural fluid for growth characteristics and neoplastic cells. Culture of specimens, and inoculation of guinea pigs may be done. Cancer causes one-half of cases of pleural fluid. Other causes are: Heart failure, tuberculosis, pneumonia, lymphoblastoma, cirrhosis of the liver, chronic nephritis, lung collapse or trauma.

In many cases of tuberculosis a lesion is not demonstrable in the x-ray of the lungs and the diagnosis must be made by studying the sputum either by smear or culture. W. S. TINNEY, M.D. in *Proc. Mayo Clinic*, Nov. 1945.

Chest Pain of Stomach Origin

Chest pain may occur due to:

1. Functional distension of the stomach due to spasm, air swallowing, or a combination of these factors.

It is characterized by mild pain, relieved by belching, a tendency for the pain to be aggravated by lying on the left side. Palpitation is often coexistent. There is a pronounced relationship to emotion and anxiety reactions are out of all proportion to the intensity of pain. It frequently occurs in young to middle aged females.

2. Disorders dependent upon abnormal pouches in the fundus of the stomach; including hernia, diverticula, and cascade deformities.

It is characterized by pain of mild to intense severity, from the left side of the chest, shoulder and arm, and of spas-

ABSTRACTS

modic and intermittent character, aggravated by ingestion of alcoholic beverages, and with marked relationship

of pain to eating and the position of the body.—T. R. HARRISON, M.D., *Navy Med. Bull.*, Oct. 1945.

Care of the Head Injury Patient

1. *Keep air way open* by (a) turning patient on his side or (b) by inserting a rubber or metal airway through the mouth into the pharynx, and (c) by frequently sucking out mucous and blood through a soft rubber catheter inserted into the pharynx and trachea. Do a tracheotomy if swelling prevents an open air way.

2. *Give 6 to 8 liters of oxygen* per minute to control anoxemia; do not let the mask press on the chin hard enough to cause pharyngeal obstruction.

3. *If cyanosis is not controlled* by mucus aspiration and oxygen, take a portable x-ray of chest which may disclose an unsuspected pneumothorax or hemothorax.

A diffuse mottling of the lung tissue visualized on the x-ray, presumably the result of mucus aspiration, is an indication for frequent change of position, intermittent dependent drainage (by elevation of the foot of the bed—Ed.) and blood plasma administration.

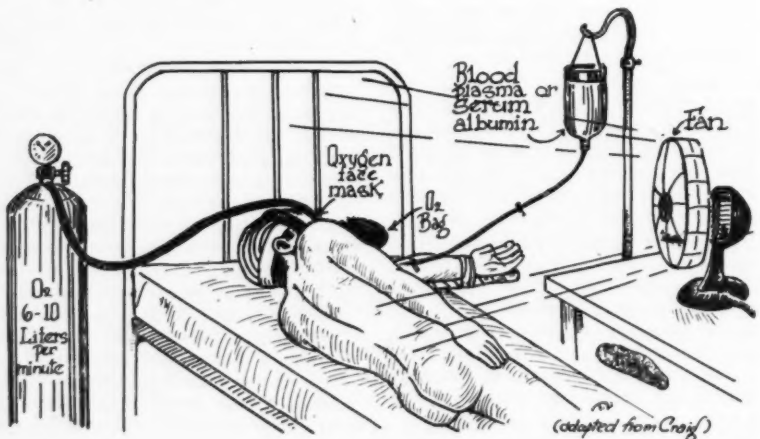
4. *Fever must be controlled*—keep rectal temperature below 102 F., as it is much easier to keep the fever low than to reduce it from 104 F. or 105 F. Use (a) iced alcohol sponges, (b) ice bags in axilla and groin, (c) electric fan, (d) eliminate clothing and sheets. Turn patient frequently so as to cool back.

5. *Lumbar puncture*: Not performed for the first few hours; performed when pulse rate is slow (50 to 60) to determine pressure and amount of blood in fluid; if it improves the patient's condition, repeat.

6. *Intravenous hypertonic solutions*: used only when intracranial pressure is high; *serum albumin gives a longer effect*.

7. *If intracranial pressure is rapidly increasing*, extra dural hemorrhage should be thought of, especially if a lucid interval was present. Ligating the artery is necessary.

8. *Fluids*: At least 1,500 cc. should be given daily; more in warm weather.—W. McK. CRAIG, M.D., in *Surg. Clin. N. Am.*, Dec., 1944.





THUMB NAIL THERAPEUTICS

Filariasis

Filariasis, in a nonendemic area, has a definite tendency to burn itself out. No demonstrable impairment of sexual drive or of ability to procreate has resulted. Severe sequelae occur in 0.2 per cent of persons. The clinical, military and psychologic import of this would-be problem should disappear by the end of 1946.—M. A. ZELIGS, M.D., (Commanding Officer, Marine Barracks, Klamath Falls, Oregon) in *J.A.M.A.* Aug. 18, 1945.

Relapsing Syphilis

The quantitative test, Kahn, may be used to predict relapses in treated syphilitic patients.—DONALD PILLSBURY, (Colonel, M.C., A.U.S.) in *Am. J. Syph.*, June 1945.

Baby Antiseptic Oil

Olive Oil	15.0
Chlorthymol	24
Perfume Oil as desired	
Mineral Oil	qs. 100.0

Reduction of Umbilical Hernia

The injection of a local anesthetic around the circumference of the hernial cleft will often permit the reduction of a strangulated or incarcerated umbilical hernia.—J. A. COSTELLO, D.O., in *J. Am. Osto. Assoc.* Mar., 1945.

Rectal Bleeding in Ulcerative Colitis

Parenteral injection of vitamin K in abundant dosage usually controls bleeding from ulcerative colitis. The bleeding is a capillary mucosal exudation. B. B. CROHN, M.D. in *N.Y.S.J.Med.*, June 15, 1945.

Nicotinic Acid for Arthritis

Daily intravenous or oral administration of nicotinic acid (not nicotinamide) in sufficient doses to cause flushing of the face and vasodilatation results in objective and subjective improvement in patients with rheumatoid arthritis.

Dosage: 200 cc. of 0.05 per cent nicotinic acid in physiologic saline solution, increased to 400 cc. Orally a tablet 50 mg. of nicotinic acid is given every 15 minutes for 3 doses before breakfast, lunch and before retiring. An oral dose of up to 600 mg. may be needed to produce vasodilation. — C. M. KURTZ, M.D., in *Wis. M. J.*, August 1945.

Removing Oil and Tar

Liquid mineral, (oil petrolatum) is the best remover of oil and tar from injured or burned surfaces.—J. M. SCHMOELE, M. D., in *Bulletin of the American College of Surgeons*, June 1944.

Preoperative Morphine

Giving two doses of morphine preoperatively doubles the postoperative complications. — I. E. GOLDBERG, M.D., (Capt. M. C., Camp Gruber, Okla.) in *Anesth. Anal.*, July 1945.

Roentgen Therapy of Arthritis

A controlled study of x-ray therapy indicates that it is of value in rheumatoid arthritis and is the best method for controlling the symptoms of rheumatoid arthritis of the spine.—IRA KAPLAN, M.D. in *N.Y.S.J.Med.*, June 15, 1945.

Inexpensive Depilatory

Barium Sulfide	4.0
Zinc Oxide	4.0
Starch	30.0



DIAGNOSTIC POINTERS

Anal Hematoma

A tense anal hematoma, resulting from rupture of one of the anal veins, commonly occurs on the lateral aspects of the anal margin, and it is in this situation that excision of the swelling is most suitably carried out. The operation should be done when the haematoma is single and tense, before the overlying skin has become ulcerated and before the clot has discharged with risk of local infection.

From "Minor Surgery" edited by Humphry Rolleston and Alan Moncrieff (Philosophical Library).

Weakness Due to Mineral Oil

Mineral oil (liquid paraffin), if taken regularly over a period of years, for constipation may result in a progressive loss in weight, pallor, weakness and anorexia suggestive of serious disease. On stopping the mineral oil, a return to normal health occurs in 2 to 3 months. Does the oil so coat the gastro-intestinal mucosa that the normal flow of secretion is impeded and food passes through without being absorbed?—A. DUNLEY-OWEN, M.D. in *South African M. J.*, Jan. 1945.

Rickets Is Still Common

A study at Johns Hopkins Hospital, Baltimore, Maryland, indicates that 46.5 percent of hospital admissions between the ages of 2 to fourteen years exhibit some signs of active rickets, and almost 5 percent will have severe rickets.

Shoulder Pain

Repeated careful x-ray examinations of the lungs may show a tumor of the apex of the lung to be the cause of persistent shoulder, scapular or arm pain.—LEROY SLOAN, M.D. in *Med Clin. N. Am.*, Jan. 1945.

Dark Field Pitfalls

Do not look for the spirochete of syphilis (*T. pallidum*) in mouth lesions, in dirty lesions near the anus, and other areas in which contamination with more or less easily distinguishable spirillar organisms occur.

Lymph nodes and dry secondary lesions are almost the only sites where other spirillar organisms do not occur.

—DONALD PILLSBURY (Colonel, M.C., A.U.S.) in *Am. J. Syph.*, July 1945.

Eyelid Edema

Edema of the eyelids may be due to sinusitis (frontal, maxillary, anterior ethmoid), especially the frontal.

Lid edema in children under seven years is due to maxillary or anterior ethmoid sinusitis.—M. R. FOLK, M.D., in *Ill. Med. Jour.*, May 1945

Renal Lesions in Draft Age

Between the ages of 18 and 38, fifty percent of lesions are renal and ureteral calculi, ten percent are pyelitis and pyelonephritis, two percent are tuberculous and one-third of one percent are tumors.

The pyelitis was caused principally by bacillus coli and staphylococcus aureus.

Hydronephrosis was found in nine percent and unexplained hematuria in three percent.—G. SLOTKIN, M.D. in *N.Y. State J. Med.*, July 1, 1945.

Measles

Reduced general and local resistance following measles results in bronchopneumonia (the most common cause of death), encephalitis, ear or kidney infections. Infants during the first few months of life and older individuals who have recovered from measles are immune.—J. A. TOOMEY, M.D. in *The Doctors Talk It Over* (Lederle).

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to **CLINICAL MEDICINE**, Waukegan, Ill., is accompanied by a check for the published price of the book.

History of Gynecology

By Richard A. Leonardo, M.D., Ch.M.,
F.I.C.S.—Froben Press. 1944. \$5.00.

The author gives the history of gynecology in ancient Egypt, among the Hebrews, and the Hindus; in ancient Greece; Alexandrian gynecology; Ancient Rome, during Byzantine period; Arabian gynecology; Salernitan gynecology; during the middle ages, in the Renaissance, and during the seventeenth, eighteenth and nineteenth century. The chapter on the vaginal speculum and on recent advances are of extra interest.

This book should be read by all physicians who treat female patients. Its contents are stimulating, especially when one sees names of some of the outstanding gynecologists of today.—K. J. K.

Conscience and Society (A Study of the Psychological Prerequisites of Law and Order)

By Ranyard West, M.D., (Lond.) D. Phil.
(Oxon.)—Emerson Books, Inc. 1945. \$3.00.

A thought provoking text which promulgates the plausible thesis that laws should be based upon human nature, not on older false concepts.

Modern Trends in Child Psychiatry

Edited by Nolan C. Lewis, M.D., Bernard
L. Pacella, M.D., International Universities
Press. 1945. \$5.00.

These lectures on child guidance and child psychiatry are short and stimulating. They discuss newer methods of therapy and diagnosis for the child's emotional disturbances, including anxiety, maternal overprotection, conduct disturbances and other conditions of importance to everyone who treats children.

Men Without Guns

By DeWitt Mackenzie. War Analyst of the
Associated Press. Foreword by Major General
Norman T. Kirk, M.C., U.S.A., The
Surgeon General.—The Blakiston Company,
1945. Price \$5.00.

The humane part that doctors, nurses and medical corpsmen take in war, has never been so splendidly presented. Illustrated with 137 paintings and sketches (most of them in color), combined with a vibrant text, this volume will be of interest to all workers in the medical and allied fields.

Most of the twelve artists are now well known from the collection made by Abbott Laboratories and now owned by the United

States government and on view at the Corcoran Gallery of Art in Washington.

These men shared the perils and hardships of the soldiers and worked in the hospitals, first aid stations, transport planes, battle field and jungles, covering the fighting fronts of Europe and Asia.

The ingenuity of medical corps men, litter bearers transporting terribly wounded men, are all told by Mr. Mackenzie in a thrilling continuity.

Every doctor will be fascinated by the descriptions and beautiful paintings. Although grim and pathetic, they tell their own story. The advancement of appliances for the injured, their care and the many new remedies which have been developed, life-saving agents, have their place in the whole picture.

The medical world should be very proud of men who gave their tireless devotion to duty, their complete disregard for personal safety, their courage and the ability to make use of what there was to be had when the right thing was not available.

This book is a beautiful tribute, and deserves a place in every physicians library.—M. B. L.

Handbook of Diagnosis & Treatment of Venereal Diseases

By A. E. W. McLachlan, M.B., Ch.B.
(Edin), D.P.H., F.R.S. Ed., Clinical
Medical Officer, Joint Committee's Clinic
and Medical Officer-in-Charge, Venereal
Diseases, New Castle General Hospital;
etc.—Williams & Wilkins Co. 1944. \$5.00.

The author's preface, "This volume has been evolved as the result of clinical instruction of undergraduate and post graduate students to provide concise introduction to the principles of diagnosis and treatment of the venereal diseases, suitable for the instruction of the elementary student, yet adequate for the needs of the busy practitioner desirous of quickly refreshing his knowledge or treating cases in his own practice." This purpose seems well fulfilled.

This book deals with the course, diagnosis and treatment of syphilis, chancroid and gonorrhoea. The diagnosis of the primary and secondary phases of syphilis is dealt with in detail and is demonstrated by both colored and ordinary photographs.

Differential diagnoses are well discussed and the method of obtaining darkfield preparations and the use of the darkfield microscope are elaborated.

The treatment of early syphilis is outlined with its attendant reactions. The method described is that used by the British and varies somewhat from the American systems. No

information is given on the newer intensive methods of treatment or the use of penicillin.

The manifestations and treatment of late nuco-cutaneous, osseous, cardiovascular and neuro-syphilis are detailed. Neuro-syphilis is classified; the procedure of lumbar puncture technique is described along with the interpretation of the spinal fluid findings. The technic of urethroscopy, metastatic complications, vulvovaginitis, and gonococcal infections of the eye are also included.—A. E. W.

The Bacterial Cell

By Rene J. Dubos, Ph.D., Sc.D. Cambridge, Mass.—Harvard University Press, 1945. \$5.00.

This is a thoughtful exposition of present-day immunological, bacteriological, and cytological problems from the viewpoint of cellular organization. It deserves reading by all who are interested in fundamentals. For one who reads carefully there are stimulating glimpses of the future.

The contents treat of bacteria in relation to their cytology, staining properties, enzymes, variability, immunology, and virulence. There is a good chapter on the mechanics of bacteriostatic and bactericidal agents. All subjects are discussed not merely in a descriptive manner but critically and with a view to the next step in research.

The chapter by C. F. Rabinow on nuclear apparatus in bacteria contains excellent photographs which make it difficult for one not to accept his arguments for the presence of a nucleus and chromatinic structures in bacteria.

The bibliography is extensive and is commendably indexed alphabetically according to the page on which the reference occurs.—E. G. W.

Psychoanalyze Yourself

(A Practical Method of Self Treatment)

By E. Pickworth Farrow, M.A., D.Sc.—International Universities Press. 1945. \$2.00.

The nervous patient who wishes to tell her troubles to the physician by the hour has always been a problem. Such patients need help. However the physician not only cannot spare the time to let them "talk themselves out" (mental cleaning or "mental catharsis") but he often has the baffled feeling that they can run on forever about their symptoms here, there and everywhere without coming to the cause.

If a competent psychiatrist is at hand, a load is taken off the physician's shoulders by referring such patients. Competent psychiatrists are still a rarity and are not available to the millions of persons in rural and small city life.

This small volume suggests a method by which such patients may be aided. The volume is written so that well informed laymen may read and understand it.

Briefly, the technic is to have the patient spend a certain time every day with a note book and fountain pen, jotting down thoughts

as they flash across the mind. No attempt is made to make notes elaborate or constructive or logical. Thoughts are written down just as they occur; for example, if nothing can be thought of, one writes, "My mind is blank." After the method has been used a number of times, the initial strangeness wears off and the patient writes freely. The written record can be brought to the physician for examination at 4 to 6 week's intervals.—R.L.G.

Atlas of Surgical Approaches to Bones and Joints

By Toufick Nicola, M.D., Professor of Orthopedics, New York Polyclinic Postgraduate School and Hospital.—The Macmillan Company. 1945. \$5.00.

Bone and joint surgery has long awaited a comprehensive book or atlas of tried and proved surgical incisions. Certainly, inadequate and unphysiologic incisions to bones and joints often contribute to the failures in operations in these areas. With thorough non-traumatic, wide exposures, most operations are greatly facilitated. With a knowledge of anatomic incisions one can be free from worry of damaging important structures either by avoiding them or by identifying and isolating them.

In a simple manner, the author has illustrated most of the nontraumatic surgical incisions. The atlas includes approaches to the shoulder girdle, upper extremity, trunk, lower extremity and mandible. The chief criticism is that the illustrations are diagrammatic and fall in instances to show depth or perspective.

The text is simple and to the point. The arrangement is excellent for it proceeds in an orderly manner down the extremities. No major incisions are omitted. No practitioner or student of bone and joint surgery could fail to profit by the use of this atlas. Careful adherence to the details of the incisions presented, will assure successful exposure.

Facial Prosthesis

By Arthur H. Bulbulian, M.S., D.D.S., F.A.C.D. Director, Museum of Hygiene Medicine, The Mayo Foundation, Rochester, Minn.—W. B. Saunders. 1945. \$5.00.

This book is a brief but complete compendium of the art of facial prosthesis. The author has been a prolific writer and authority in prosthetics for many years and needs no introduction. The text is arranged as a handbook suitable for every worker in the field. The materials and methods are described and illustrated in such detail that a neophyte should be able to make an acceptable prosthesis by simply following instructions. It is not intended to be an advanced work for the already trained individual and hence does not give much space to methods and materials which are still in the experimental stage.

In the introduction, mention is made of the important fact that a prosthesis is always a

BOOK REVIEWS

last resort. Plastic surgeons well know that the most lifelike prosthesis rarely will satisfy a patient so long as there is any possibility of restoring the missing part with living tissue.

After a brief historical review, prosthesis is considered from every aspect. Indications, materials, instruments and laboratory facilities are listed, described and illustrated in detail. The principles and methods of taking impressions and making casts are outlined step by step from the examination of the patient to the finished product.

Prosthetic reconstruction of the nose, ear and orbital area is taken up in minute detail employing pre-vulcanized Latex as material with its practical application of principles and necessary precautions. Plastics, which may prove to be the material of choice in the future, are given a brief summary.

This book provides for the student, surgeon and worker in prosthetics a complete and authoritative handbook and as such fills a need.—C.L.S.

A Future for Preventive Medicine

By Edward J. Stieglitz, M.D., F.A.C.P.—
The Commonwealth Fund. 1945. \$1.00.

A suggested plan whereby true public health may be furthered by all groups concerned. The author is witty and searching in his remarks.

Skin Diseases in Children

By George MacKee, M.D., Professor of Clinical Dermatology, Columbia University, New York and Anthony Cipollaro, M.D., Associate in Dermatology.—Paul Hoeber. (2nd Edition) 1946. \$7.50.

This book is written for the general practitioner, and for this reason stresses medication and techniques that are readily available. Diagnosis is emphasized; it is well illustrated by clear photographs and color illustrations.

Ambulatory Proctology

By Alfred J. Cantor, M.D., Associate Proctologist, Kew Gardens General Hospital, New York.—Paul B. Hoeber. 1945. \$8.00.

A simple, straightforward text dealing with everyday problems of ano-rectal disease. The techniques advocated may be used by any well informed practitioner in his office or in the minor surgical room of a hospital.

Manual of Diagnosis and Management of Peripheral Nerve Injuries

By Robert A. Groff, M.D., Lt. Col., M.C.A.U.S., Formerly Assistant Professor of Surgery, Jefferson Medical College, Philadelphia, and Sara Houtz, B.S., Lt. (P.T.), A.U.S.—J. B. Lippincott Company, 1945. \$8.00.

A thoroughly practical manual telling briefly how to recognize various types of nerve injuries and their best medical or surgical therapy. The many illustrations showing how to test for each nerve injury are a

postgraduate course in themselves. The author uses common sense, simplified technics for explaining his technical subject to the average surgeon and physician.

Bedside Clinics

By Francis D. Murphy, M.D., F.A.C.P., Professor, Department of Medicine, Marquette University School of Medicine, Milwaukee.—Marquette University Press. (Vol. I) 1945. \$3.00.

This is the ideal type of teaching, the bringing of the science of medicine to the patient. So much of medical literature and medical meetings today concern themselves with the setting forth of orderly, didactic material, rather than dealing with that unpredictable, difficult subject, the patient.

Unhappy Marriage and Divorce

By Edmund Bergler, M.D. Introduction by A. A. Brill, M.D.—International Universities Press. 1946. \$2.50.

An unusual book which covers both the psychic and some of the physical aspects of unhappy sexual and marital adjustments. The underlying mechanism for emotions in regard to the opposite sex are explained according to the Freudian conception.

Evolution in Plastic Surgery

By Maxwell Maltz, M.D. Director, Department of Plastic Surgery, West Side Hospital.—Froben Press. 1946. \$5.00.

For those interested in plastic surgery, this first history of the subject will be of great interest. It is a survey of various men and their achievements down the centuries, often illuminated with brief quotations and illustrations. The author includes a number of before-and-after photographs from his own practice.

Howell's Textbook of Physiology

Edited by John F. Fulton, M.D., Sterling Professor of Physiology, Yale University School of Medicine.—(15th Edition) W. B. Saunders Co. 1946. \$8.00.

Howell's noted text has been revised by a group of physiologists headed by a very competent editor. It is not merely a revising of the material that was already in print, but rather many of the sections have been submitted in new form and content. "Howell's" will continue to be one of the leading references in the field of physiology.

Diseases of Nose, Throat and Ear

Edited by Chevalier Jackson, M.D., Honorary Professor, and Chevalier L. Jackson, M.D., Professor of Broncho-Esophagology, Temple University, Philadelphia.—W. B. Saunders Co. 1945. \$10.00.

Sixty-four eminent contributors have compiled a workmanlike, technic-filled text. The illustrations indicate diagnosis and therapy unusually well. New, proved technics are well described. This is a book for the working clinician.

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